

## DIRECTED PRACTICE

ESTIMATED TIME 15 MIN



# Model of a Mountain

## GROUPING

small groups

## MATERIALS PER GROUP

- plastic cup
- sand
- cup of water
- plastic plate
- crayons

## OBJECTIVES

Children will make a model of a mountain.

## TEACHER BACKGROUND

Mountains are formed by the movement of Earth's tectonic plates. Plates are blocks of crust and upper mantle rock. Sometimes two plates collide with each other. One plate is forced upward, causing mountain ranges to form. The other plate is forced downward and its edge eventually sinks into the core and melts. Other times two plates collide but neither plate is pushed down. Rather, the plates buckle up, forming a mountain. The Himalayan mountains were formed this way.



## SAFETY PRECAUTIONS

- Observe the classroom to make sure it remains safe, orderly, and clean.
- Students should wear goggles, aprons, and gloves.
- Ask children to wash their hands after they finish the practice.

## DIRECTED PRACTICE

### MATERIALS



### Model of a Mountain



**Ask a question:** How can you make a model of a mountain?

- 1 Fill the plastic cup with sand.
- 2 Add a small amount of water to the sand in the cup.

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## SCIENCE SKILLS

By the end of this practice, children will use the following science skills:

- Observe
- Make a model
- Record data
- Communicate



## ANCHOR ACTIVITY

Use the Anchor Activity for this lesson as a warm-up to gauge student prior knowledge and help them engage at the beginning of class.

3 Put a plastic plate over the cup. Then, turn the cup and plate upside down and carefully lift the cup upward.

4 **Observe**  
What happened when you removed the cup from the plate?

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5 **Record**  
Draw your model.

6 **Communicate**  
Share your model with your classmates. Compare and contrast your model with a real mountain.

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## STEPS

- 1 Prepare the workstations with the materials and have children work in small groups. One member of each group should use 50 grams of sand to fill the plastic cup.
- 2 Another member of each group should pour some water into the sand in the cup.
- 3 Children may want to work together to carefully turn the cup and plate over.
- 4 **Observe.** Help children describe how the sand looked when the cup was removed. Have them describe the shape and size. **Possible answer:** The sand looked exactly like the cup.
- 5 **Record.** Drawings will vary. Accept all reasonable drawings.
- 6 **Communicate.** Have groups share their models with each other and tell how their model is like a mountain and how it is different. **Possible answer:** It is like a mountain because it is higher than the area around it. It is not like a mountain because it is very fragile.

## EXPECTED RESULTS

Children will make a model of a mountain, using sand.

## RESULTS EXPLANATION

The water caused the particles of sand to stick together and the cup gave the wet sand the shape of a mountain.

## CONCLUSION

Mountains are made up of rocks.